



# **Incorporating RCM into Your Environmental Management Systems**

**Achieving homogenous integration of  
environmental sustainability and operational  
readiness**

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# The Existing Air Force Management System



- ▶ **Well established** with respect to audits, planning documents, permit monitoring, measurement, emergency preparedness and response, training and documentation, as well as environmental and quality policies
- ▶ However, these programs are **typically executed in a fragmented manner** aligned along environmental media and/or statutory requirements, and focused on achieving/maintaining compliance
- ▶ Hence, **components of theses programs are not well integrated** and typically fail to consider mission objectives

# The Air Force EMS Structure Overview



- ▶ EMS identifies and provides for the planning and management of all the organization's operations and activities, including facility training and operation resources
- ▶ The EMS identifies risks and creates focus to reduce those risks through training, formalizing work procedures, document control and performance measures

# The Air Force EMS Structure Overview (continued)



- ▶ EMS involves and integrates senior management, through the use of the ESOHC and teams to continually monitor performance and steer the process through its short term needs and long term planning
- ▶ Manages programs and activities in a manner that protects the resource base for long term planning of training and operational requirements

***The next slides review in detail each of the five elements of the EMS***

# The Air Force EMS

## Detailed Review of Environmental Policy



Each Installation is required to develop an Environmental Policy Statement. In this document, the installation commits to:

- ▶ Comply with all applicable requirements, commits to the prevention of pollution and continually improve the system
- ▶ Systematically identify and reduce environmental risks
- ▶ Integrate environmental considerations into day-to-day decisions and practices
- ▶ Meeting specific environmental concerns related to the local area

The Policy is signed by ESOHC Chair; reviewed at least annually to ensure that it is still applicable.

# The Air Force EMS

## Detailed Review of the Planning Phase



- ▶ Identify environmental impacts; rank impacts based on risks
- ▶ Set objectives and targets to reduce risks
- ▶ Develop Action Plans to achieve objectives and targets

# The Air Force EMS

## Detailed Review of Implementation and Operations



For those activities with the highest risk:

- ▶ Clearly define roles and responsibilities
- ▶ Provide job-specific training related to control or reduce risk or impact
- ▶ Develop or update written procedures
- ▶ Stipulate operating criteria to support current and emerging operational requirements
- ▶ Ensure current versions of the necessary plans, checklists and other documents are available when needed, where they are needed.

# The Air Force EMS

## Detail Review of the Checking and Corrective Actions Phase



- ▶ Assess Health of the management system
- ▶ Evaluate compliance with environmental regulations
- ▶ Identify gaps in the existing environmental management and RCM documentation and initiate new procedures to ensure continual improvement
- ▶ Ensure root causes of nonconformities are identified and corrective and preventive actions are implemented, documented and reviewed
- ▶ Track performance measures
- ▶ Evaluate compliance with environmental regulations
- ▶ Detect trends
- ▶ Identify corrective actions for continual improvement

# The Air Force EMS Management Review



- ▶ ESOHCs become more focused through tracking and monitoring the effectiveness of the management system by:
- ▶ Tracking EMS and ESOHCAMP assessment results
- ▶ Monitoring environmental indicators and performance measures
- ▶ Monitoring the progress of action plans towards achievement of objectives and targets
- ▶ Tracking the status and history of corrective and preventive actions
- ▶ Tracking the mitigation of elimination of activities with the highest risk

# Many Issues Transcend Traditional EMS

*The AF EMS will help the AF reduce the risk and impacts to the environment and increase the effectiveness of day-to-day operations related to environmental impacts. However, an EMS that only focuses on continuous risk reduction of environmental impacts, does not typically consider regional trends in...*

- ▶ Sustainability of The Natural Resource Base
- ▶ Availability of Air Space
- ▶ Water quality and availability
- ▶ Energy supply
- ▶ Endangered species population and distribution
- ▶ Land use and growth in the surrounding communities
- ▶ **That's why RCM is needed. An EMS is the roadmap, and RCM is the compass**

# Focus of Change

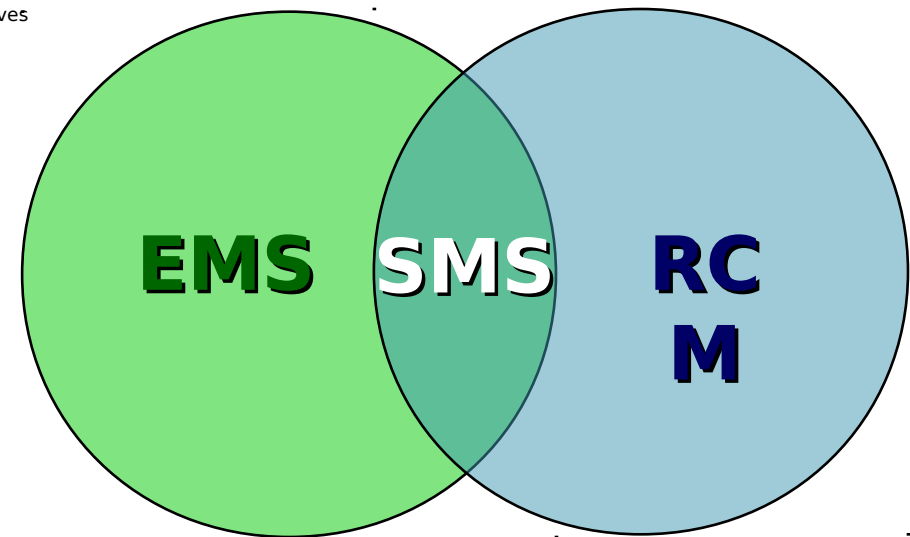
- ▶ Integrated management of the *entire resource base* including natural infrastructure
- ▶ Aggressive management of natural infrastructure to meet *mission needs* not solely for regulatory compliance
- ▶ Managing natural infrastructure as *assets*, not liabilities
- ▶ Identifying *operational requirements* and translating these into resource requirements (i.e., needs statements, footprints)
- ▶ Identifying and quantifying resource *deficiencies* (i.e., encroachment) and resource *opportunities* (i.e., headspace, room for growth)
- ▶ *Preventing encroachment* and addressing deficiencies in the resource base through a comprehensive and well coordinated set of management actions



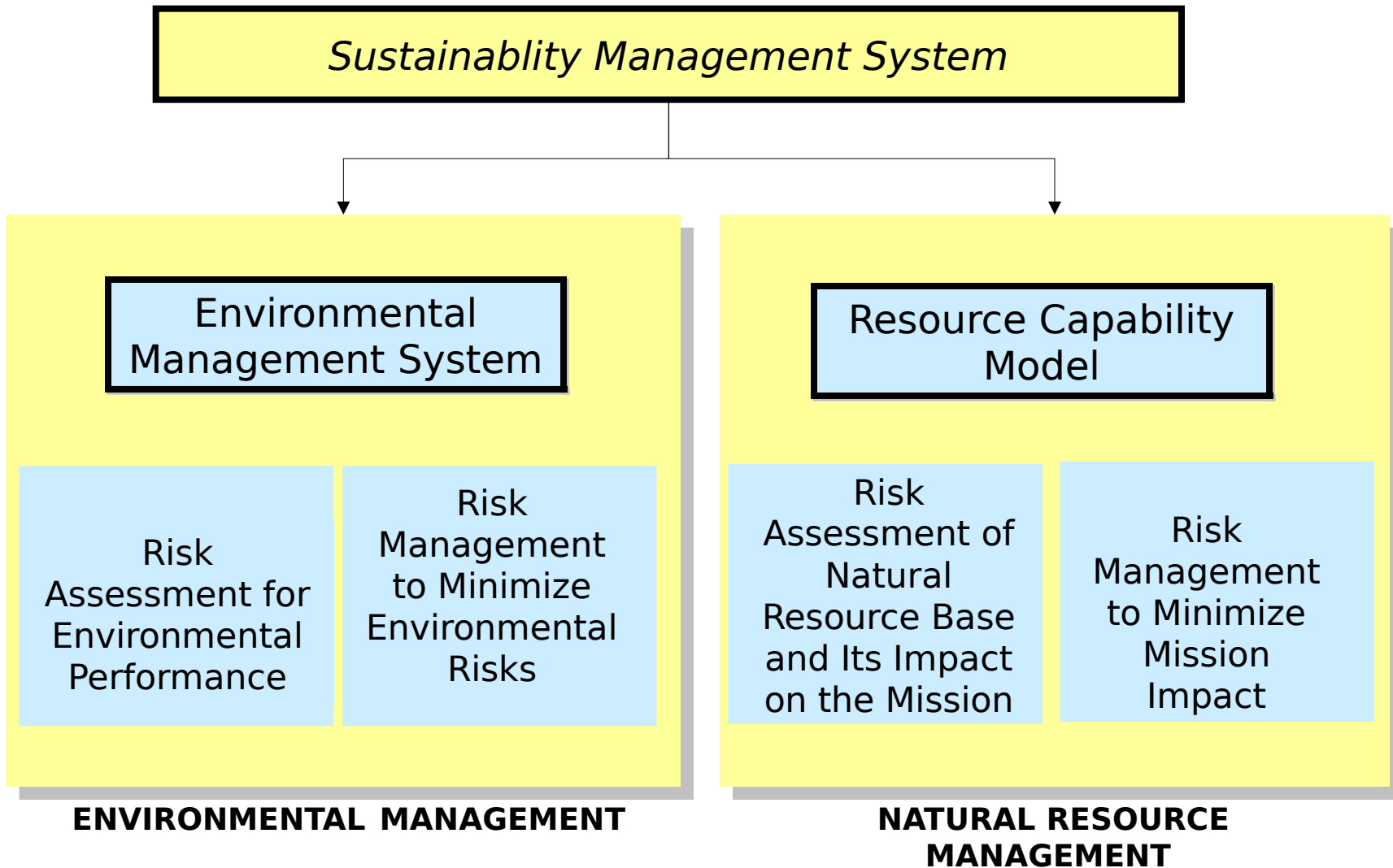
# Need for Sustainability Management System

- ▶ A management system provides the framework necessary to achieve long-term goals for sustaining, restoring and modernizing the resource base and consequently the mission

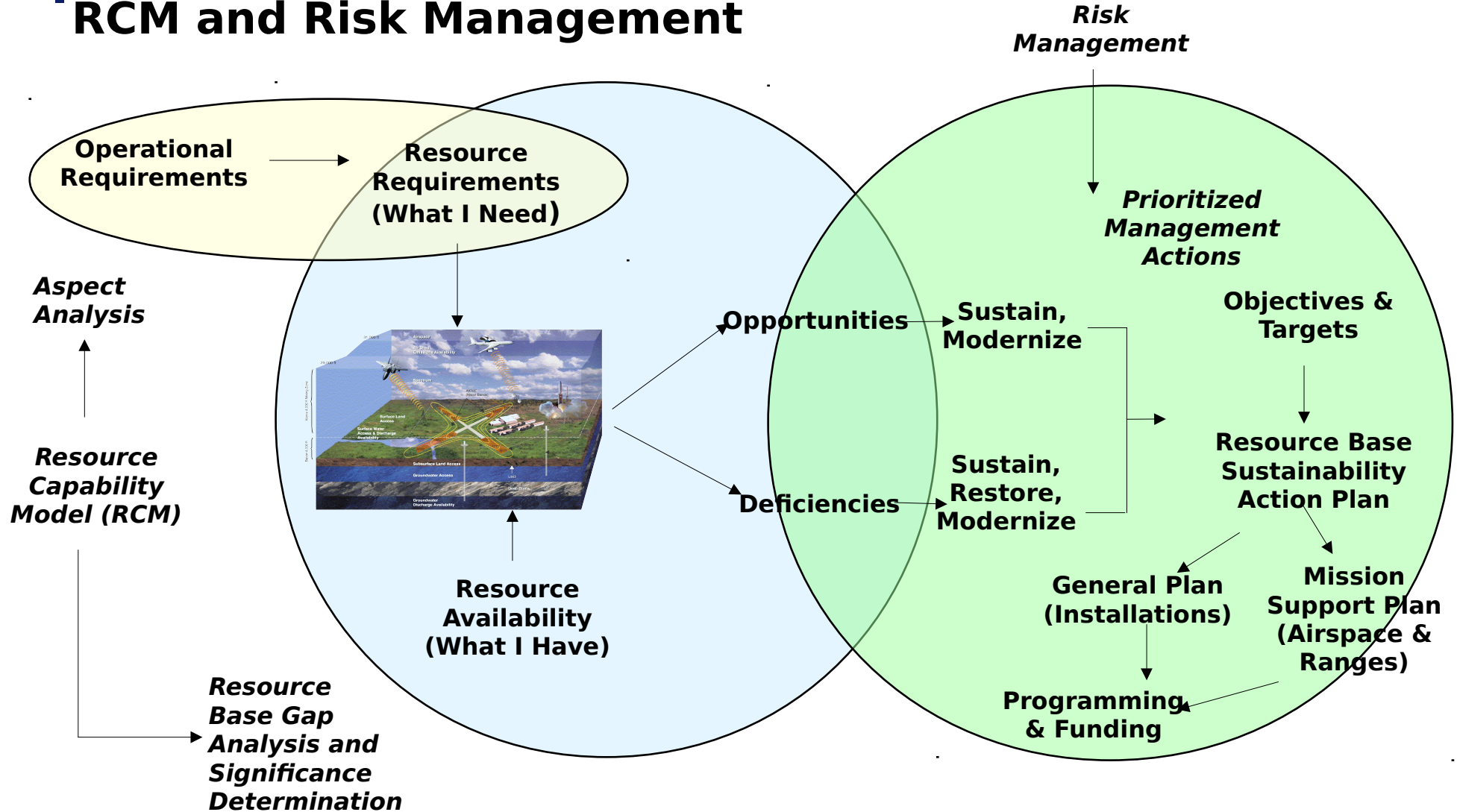
- ▶ Key attributes of a management system include:
  - Focus on supporting operational requirements
  - Identification of resource requirements
  - Identification of gaps in the resource base given requirements
  - Correcting deficiencies in the resource base through prioritized investments
  - Identifying and sustaining resource opportunities to provide for mission growth via force structure moves
  - Teamwork across the organization, inclusive of operators and civil engineers



# Sustainability



# Resource Base Management System: RCM and Risk Management



# Where Does RCM Fit Into the Management System Context?

**Track the efforts to eliminate resource deficiencies**

**Resource deficiencies identified during the RCM Application**

**Sustaining, restoring, & modernizing the resource base becomes part of the day-to-day operations**



**Installation commits to sustaining, modernizing or restoring the resource base to ensure operational capability**

**RCM degradation used to set objectives and targets to mitigate risks**

# RCM integration with the Policy Phase

- ▶ Installation Environmental Policy statement includes a commitment to sustaining the resource base in addition to maintaining compliance and preventing pollution
- ▶ Sustaining, restoring, and modernizing the resource base becomes a critical component of the management system

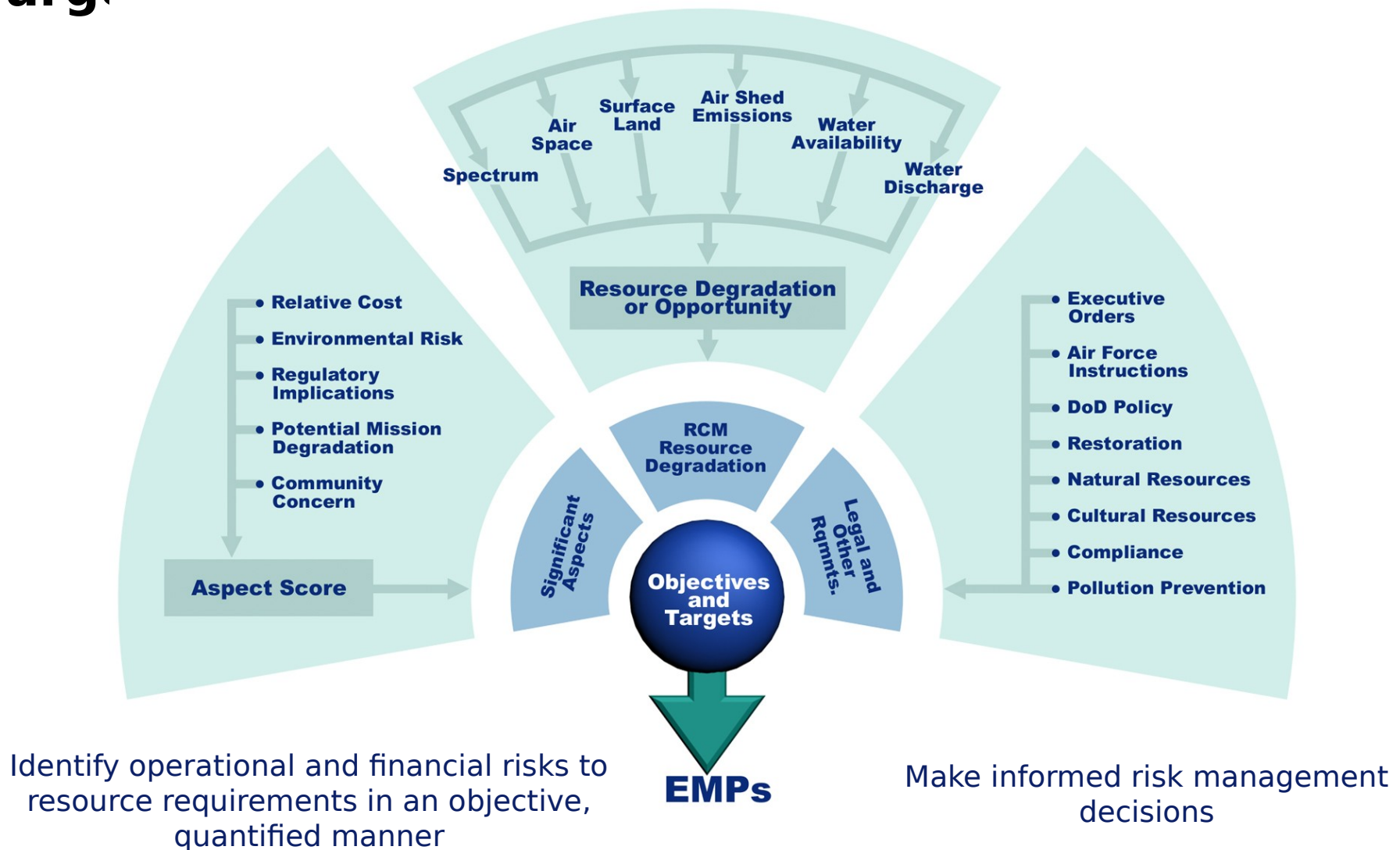


# RCM integration with the Planning Phase

- ▶ Encroached resources as identified by the RCM assessments (conducted during the Checking and Corrective Actions Phase) are used as part of a risk ranking methodology
- ▶ Objectives and targets are set and action plans developed to mitigate risk or degradation



# How RCM Data Used in the Setting Objectives and Targets



# Examples of RCM Integrated into Environmental Objectives and Targets

- ▶ Objective: Meet Requirements for High Altitude, Supersonic Training
  - Target 1: Obtain additional air space by FY 07 to meet all operational training needs
  - Target 2: Complete EA by March 2005
  
- ▶ Objective: Meet more stringent wastewater discharge permit requirements for the on-base WWTP
  - Target 1: Increase effectiveness of the WWTP by competing the design and construction by FY 07
  - Target 2: Design and build a wastewater land application system by FY07
  - Target 3: Complete a permit review to identify potential opportunities to eliminate sampling burden once new infrastructure is in place
  
- ▶ Objective: Meet PM 2.5 rules by implementing P2 Solutions
  - Target 1: Conduct Opportunity assessment on particulate emission sources and implement solutions by FY 07

# The Resource Base Sustainability Action Plan

- ▶ Describe the “who, when, where, & how ” the objective and targets will be achieved
- ▶ Designated responsibilities at each functional level for achievement
- ▶ Identify pertinent records, plans and documents
- ▶ Clear time lines for achievement including milestones and performance indicators created to monitor performance

The image displays three overlapping templates for the Resource Base Sustainability Action Plan. The top template is titled 'RESOURCE BASE SUSTAINABILITY ACTION PLAN' and contains the following sections:

|                              |      |                             |  |
|------------------------------|------|-----------------------------|--|
| Systemic or 1 Aspect         |      | Document Classification     |  |
| Description                  |      | Anticipated Completion Date |  |
| Systemic Response for Aspect | Unit | Theme                       |  |
| Contributing Resources       |      |                             |  |
| Objective(s)                 |      |                             |  |

The middle template is titled 'Performance Indicators' and contains the following sections:

|                                                     |
|-----------------------------------------------------|
| Performance Indicator(s)                            |
| Plan Description (Inputs, Methods, Responses, etc.) |

The bottom template is titled 'Structure, Architecture, Response & Time' and contains the following sections:

|                                          |                                       |
|------------------------------------------|---------------------------------------|
| Structure, Architecture, Response & Time | Systemic Response                     |
| Time(s)                                  | Systemic Response                     |
| Structure(s)                             | Systemic Response and Record Location |
| Document(s)                              | Systemic Response and Record Location |

# An Example of The Resource Base Sustainability Action Plan

- ▶ Objective: Meet Requirements for High Altitude, Supersonic Training

| Who                                                                                                                                                           | Actions                                                                 | When          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------|
| <ul style="list-style-type: none"><li>- Installation Air Space Manager (opr)</li><li>- Installation Community Planner</li><li>- HQ ACC/CEVA and DOR</li></ul> | Define Air space training needs                                         | December 2004 |
| HQ ACC/CEVA & Installation POC                                                                                                                                | Complete EA                                                             | March 2005    |
| Air Space Managers                                                                                                                                            | Complete “needs statement” documentation to request additional airspace | June 2005     |
| HQ ACC/DOR                                                                                                                                                    | HQ ACC submits “needs statement” documentation to Air Staff             | December 2005 |

# RCM Integration with the Implementation and Operation Phase

- ▶ Reduce Risk through investments that support operational and regulatory requirements
- ▶ Clearly define roles and responsibilities
- ▶ Provide job-specific training related to control or reduce risk or impact
- ▶ Develop or update written procedures
- ▶ Stipulate operating criteria to support current and emerging operational requirements
- ▶ Ensure current versions of the necessary plans, checklists and other documents are available when needed, where they are needed.



# RCM Integration into the Checking and Corrective Action Phase

- ▶ Assessments: RCM Application assesses the ability of existing resource base to meet mission requirements
- ▶ Corrective Actions: Actions are taken to sustain, restore, and modernize existing resource base
- ▶ Performance measure: Health of resources base is tracked over time in formal reporting systems



# RCM Integration into the Management Reviews



- ▶ Availability of resources reviewed in leadership regularly
- ▶ RCM data affects future basing decisions

# What are RCM results used for?

## Installation

- ▶ Report Card
- ▶ Resource readiness
- ▶ Internal priorities
- ▶ Budget requests
- ▶ 1391 justification
- ▶ Installation Readiness Report
- ▶ EMS Risk Reduction

## MAJCOM

- ▶ Basing decisions
  - ♦ BRAC/Non-BRAC
- ▶ Budgeting within command
- ▶ FSM
- ▶ Installation Readiness Report
- ▶ Trend Resource Health
- ▶ Airspace requests
- ▶ Mission support plans
- ▶ 1391 justification
- ▶ ESOHCAMP oversight

## ▶ DoD

- ▶ Overall readiness
- ▶ Basing & Decisions
- ▶ Congressional reporting

## Air Force

- ▶ Overall readiness
- Basing & Decisions
- Congressional reporting

## Closing Thoughts

Thank you for your attention and participation.